Building a Framework for the Future

Agenda is subject to change, please check for updates. **This page was last updated on 3/14/02 . Speaker Affiliations Added**

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Online Registration

SUNDAY, MAY 19, 2002

12:00 – 5:00 PM	Conference Registration
5:00 – 7:00 PM	Welcome Reception Hosted by the NWQMC – All are encouraged to attend.

MONDAY, MAY 20, 2002 – Concurrent Extended Sessions

8:30 – 9:00 AM	Welcome to the 3rd NWQMC National Monitoring Conference					
9:00 – 10:30 AM	Ground Water Network Design Issues	Surface Water Network Design Issues	Looking Beyond the Border: International Issues of Cooperation and Comparability	Use NEMI First – The Role of NEMI in Monitoring Design	Capacity Building for State and Regional Councils	Bridging the Gap Between Assessment of Condition and Diagnosis of Impairment
10:30 – 10:45 AM	Break					
10:45 – 12:15 PM	Clean Water Act (CWA)/Safe Drinking Water Act (SDWA) Integration: The Ground Water Link cont. after lunch	Statistical Design and Analysis of Monitoring Programs (with emphasis on 305(b) and 303(d) preliminary listing process) cont. after lunch				
12:15 – 1:30 PM	Lunch (On Your Own)					
1:30 – 4:30 PM	Clean Water Act (CWA)/Safe Drinking Water Act (SDWA) Integration: The Ground Water Link – continued	Statistical Design and Analysis of Monitoring Programs (with emphasis on 305(b) and 303(d) preliminary listing process – continued	Looking Beyond the Border: Building a Monitoring Framework for the Great Lakes Basin	New Technologies	Statistics for Everyone	Celebrating Our Nation's Waters: Monitoring to Motivate, Stimulate, and Integrates

NOTE: Each 90-minute session within the six conference tracks will include oral presentations followed by a question and discussion period.

TUESDAY, MAY 21, 2002

8:00 – 10:00 AM	Opening General Session				
10:00 – 10:30 AM	Break				
10:30 – 12:00 PM **Track 1: Setting the Stage for Monitoring** **Concurrent Presentations and Discussions**	**Collaboration: Meeting Multiple Needs through Monitoring Partnerships** Expanding the Network: A Regional Model of Cooperative Surface Water Quality Monitoring, **Casandra Champion, Metropolitan Council Environmental Services, Minnesota** Connecticut River Fish Tissue Study, **Bethany Card, New England Interstate Water Pollution Control Commission, MA** Developing and Maintaining a Collaborative, Multi-Watershed Monitoring Network, **Mark Doneux, Washington Soil and Water Conservation District, Minnesota** Linking Science, Extension, and Education in Water Quality Monitoring, **Niamh O'Leary, Wells College**	**Volunteer Monitoring Expands Your Reach** Cost Effective/Level 4 Citizen Monitoring, **Philip Emmling, Environmental Chemistry & Technology Program, University of Wisconsin - Madison** IOWATER, Iowa 's Statewide Volunteer Water Quality Monitoring Program, **Richard Leopold, Iowa Department of Natural Resources** The Role of Volunteer Watershed Monitors in TMDL Development and Implementation, **Diane Wilson, Pennsylvania Department of Environmental Protection** Aquatic Monitoring Workshops for Alaska Tribes, **Elaine Major, University of Alaska, Anchorage**	**Watersheds: The Natural Basis for Monitoring Design** Water Quality Monitoring at the Watershed Level in the Upper Grande Ronde River Basin , **Teena Ballard, USDA USFS La Grande Ranger District, Oregon** Monitoring Pesticides for TMDL Development in the San Joaquin River Basin , California , **Charles Kratzer, USGS Sacramento, California** Developing a Scientific Basis for Source Water Protection Policies in the Salt Lake City Watershed Canyons, **Lindsay Griffith, Brown and Caldwell - Golden, Colorado**	**What's New at the State Level: New Ways to Meet Increasing Needs** A 5 Year Strategy for Comprehensive Surface Water Monitoring, **Arthur Garceau, Indiana DEM** Life on a High Wire: Managing a Monitoring Program to Meet Multiple Goals and Expectations, **Gary Kohlhepp, Michigan Department of Environmental Quality** Oklahoma 's Beneficial Use Monitoring Program (BUMP), **Monty Porter, Oklahoma Water Resources Board, Water Quality Programs Division** The South Carolina Estuarine and Coastal Assessment Program (SCECAP), **David Chestnut, South Carolina Dept. of Environmental Protection**	**Monitoring Design on a National Scale** Consideration of Contaminant Sources, Physical Hydrology, and Policy Implications in a National Design for Monitoring Groundwater Quality, **Jeffrey Stoner, US Geological Survey, Middleton, WI** Design of the Trend Network for Rivers and Streams in the National Water Quality Monitoring Assessment (NAWQA) Program, **David Mueller, USGS Lakewood, Colorado** Application of a Probabilistic Sampling Design on a National Level: EPA's National Fish Tissue Study, **Leanne Stahl, US EPA Office of Science and Technology Washington, DC** National Perspective on Wetland Monitoring and Assessment, **Doreen Vetter, U.S. EPA, Washington, D.C.**
12:00 – 1:00 PM	Lunch (Box Lunch Provided)				
1:00 – 1:30 PM	Break, posters highlighted				

1:30 – 3:00 PM **Track 2/3: Field and Laboratory Methods for Today and Tomorrow** **Concurrent Presentations and Discussions**	**Ground Water: Sampling and Analysis** Immunoassay Monitoring for Atrazine in Texas, **Alan Cherepon, Texas Natural Resource Conservation Commission** Low Purge Volume Sampling Technique for the Collection of Groundwater Samples at Brookhaven National Laboratory, **Douglas Paquette, Brookhaven National Laboratory** Investigation of Carbon Tetrachloride Contamination in a Deep Aquifer with Westbay Monitoring Wells, Former Fort Ord , California , **Michael Taraszki, Harding ESE, Inc.** Serious Problems with Ground Water Monitoring Wells: The Confounding Effect of Vertical Ambient Flows, **Alper Elci, Environmental eng. & Science Dept., Clemson University**	**Metals: Sampling and Analysis** Improvements in Field Methods for Arsenic Monitoring, **Dan Kroll, Hach** Monitoring Dissolved Metals in the Ohio River Using Clean Sampling Techniques, **Kimberly Mays, Ohio River Valley Water Sanitation Commission** Field Instrumentation and Monitoring for Mercury Isotopes at the Experimental Lakes Area, Ontario, Canada, **David Owens, USGS** Utilizing Stable Mercury Isotopes for Tracers in Aquatic Ecosystems, **Mark Olson, U.S. Geological Survey, Middleton, WI**	**In-Situ Monitoring** Field Sampling and Analytical Methods for Monitoring Volatile Organic Compounds in Karst Springs, **Shannon Williams, U.S. Geological Survey** Continuous Stream Monitoring for a High Quality Water Resource: Silver Creek, Washington County , Minnesota, **Robert Fossum, Washington Soil and Water Conservation District** Adapting Marine In Situ Photometric Nutrient Monitors for Freshwater Applications, **Charles Patton, US Geological Survey, National Water Quality Laboratory** Remote Sampling Technology: Proactive Management of Surface Water and Development of Comprehensive Data Sets for "Early Warning" Applications, **Christopher Owen, Apprise Technologies, Inc.**	**Early Warning Monitoring** Real-time Biomonitoring to Check the Water Quality, **Christian Moldaenke, Moldaenke Company** Monitoring Strategy for the Dutch National Early Warning Network, **Ad Jeuken, RIZA** Toward Early-Warning Monitoring for Water-System Security: DOE-USGS Collaboration on Development and Testing of Advanced Sensors, **Glenn Patterson, USGS - Water Resources Division** Drinking Water Early Warning Detection and Monitoring Technology Evaluation and Demonstration **Rajib Sinha, IT Corporation**	**Enhancing Data Quality and Comparability – Part 1** New Efforts to Implement PBMS, **Jerry Parr, Catalyst Information Resources, L.L.C.** Keeping an Analytical Program in Step with Rapidly Evolving Data Quality Objectives, **Craig Payne, Battelle Memorial Institute** Use of Monitoring Data for Detection Limit Determination-Practical Suggestions for the Limit of Detection Dilemma, **William Sonzogni, University of Wisconsin (Wisconsin Public Health Laboratory)** Park Service Experience with Developing Monitoring and QA/QC Guidance Consistent with that of other Federal Agencies and States, **Roy Irwin, National Park Service, Water Resource Division**
3:00 – 3:30 PM	Break, posters highlighted				

3:30 – 5:00 PM **Track 2/3: Field and Laboratory Methods for Today and Tomorrow** **Concurrent Presentations and Discussions**	**Biological Monitoring** NEMI: Field Methods, **Dan Sullivan, USGS** Monitoring Needs to Meet Benthic TMDL Requirements, **Tamim Younos, Virginia Water Resources Research Center** Invertebrate Sample Processing at the U.S. Geological Survey's National Water Quality Laboratory, **Stephen Moulton, U.S. Geological Survey** In-Situ Monitoring of Phytoplankton on the Cell Level, **George Dubelaar, CytoBuoy b.v.**	**Nutrients: Sampling and Analysis** Continuous Monitoring of Nutrients and Chlorophyll in North Carolina Estuaries, **Jerad Bales, U.S. Geological Survey** Sampling Strategies for Determining Nutrient Loads in Streams, **Thomas Soerens, University of Arkansas-Civil Engineering** Corn Leaf Nitrate Reductase-A Nontoxic Alternative to Cadmium for Photometric Nitrate Determinations in Water Samples, **Ellen Campbell, US Geological Survey, National Water Quality Laboratory** Alternatives to Kjeldahl Digestion for Determination of Total and Particulate Nitrogen in Water, **Charles Patton, US Geological Survey, National Water Quality Laboratory**	**Screening Tools for Priority Contaminants** Comparison of Indicator Bacteria Densities and their Relation to Turbidity in Kansas Streams, **Patrick Rasmussen, U.S. Geological Survey** Monitoring of Chlorinated Disinfection By-Products in Drinking Water: Approach Based in Differential Spectroscopy, **Gregory Korshin, University of Washington** Using Colilert to Monitor the Impacts of Wet Weather Pollution Sources, **Mindy Garrison, Ohio River Valley Water Sanitation Commission** Determination of Total and Clay Suspended-Sediment Loads From In-Stream Turbidity Data in the North Santiam River Basin , Oregon ; 1998-2000, **Mark Uhrich, U.S. Geological Survey**	**Remote Sensing** Combining Satellite Remote Sensing and Volunteer Secchi Disk Measurement for Lake Transparency Monitoring, **Thomas Lillesand, Environmental Remote Sensing Center, University of Wisconsin - Madison** Screening to Identify and Prevent Urban Storm Water Problems: Estimating Impervious Area Accurately and Cheaply, **James Harrison, USEPA, Region 4** Lake Water Clarity Assessment at Broad Geographic Scales Using Satellite Remote Sensing, **Steve Kloiber, Metropolitan Council** Assessing Nitrogen Contamination Potential Via Remote Sensing, **Larry Beard, USDA/NASS/Environmental, Economics & Demographics Branch**	**Enhancing Data Quality and Comparability – Part 2** NEMI: Laboratory Analytical Methods, **Herb Brass, USEPA, Office of Ground Water and Drinking Water** Use of Field Quality-Control Samples in Determining the Quality of Pesticide Data Collected for the USGS National Water-Quality Assessment (NAWQA) Program, **Jeffrey Martin, U.S. Geological Survey** The Blind Audit Program: An Ongoing QA Initiative of the Chesapeake Bay Water Quality Monitoring Program, **Carl Zimmerman, University of Maryland Center for Environmental Science, Chesapeake Biological Lab.** Meeting the Demands of Methods 1631 and 245.7 in a Single Instrument with Dual Atomic Fluorescence Detectors, **David Pfeil, Leeman Labs, Inc.**
5:00 – 6:00 PM	Exhibit/Poster Session				
5:00 – 7:00 PM	Reception				

WEDNESDAY, MAY 22, 2002

8:00 – 9:30 AM **Track 4: Exploring Opportunities in Data Management** **Concurrent Presentations and Discussions**	**Moving Forward with Water Quality Data Elements - Description** Using Common Data Elements to Exchange Data with Confidence, **Charles Job, USEPA** Biological Water Quality Data Elements, **Charles Peters, US Geological Survey, Middleton, WI**	**Applied Database Systems** MrBST Software Application, **Milo Anderson, USEPA, Region 5** Assessment of the Water Quality Impacts of Farming Systems by Integrating Databases and Simulation Models, **Jerry Hatfield, USDA-ARS National Soil Tilth Laboratory** Hydrologic Databases for Federally-Listed T&E Species, **Allen White, US FWS Austin, Texas**	**Data Rich Indicators** Monitoring the Effectiveness of TMDL Implementation with the Oregon Water Quality Index (OWQI), **Curtis Cude, Oregon Dept. of Environmental Quality** Indicators for the Great Lakes , The SOLEC Set, **Paul Bertram, US EPA Great Lakes National Program Office Chicago, Illinois** Moving from "Data" to "Indicators": Connecting Water with Decision-Making, **Elisabeth Graffy, USGS Middleton, Wisconsin** Mapping the Road to Recovery: Integrated Water Quality and Biological Monitoring of Onondaga Lake , New York, **Elizabeth Moran, EcoLogic, LLC New York**	**Tools to Help Link, Explain, and Manage Data** XML - The Lingua Franca of the Information Age, **Abigail Cantor, Process Research Madison, Wisconsin** The Milwaukee Metropolitan Sewerage District Corridor Study: A Case Study in the Compilation of Surface Water Related Datasets from Multiple Local, State, and Federal Agencies, **Morgan Schneider, U.S. Geological Survey, Water Resources Division** Letting Monitoring Data Speak for Themselves, **Revital Katznelson, State Water Resources Control Board Oakland, California** Watershed Assessment Tracking and Environmental Results System (WATERS), **Thomas Dewald, USEPA, Washington, D.C.**	**Data Warehouses and Repositories** Natural Systems Data Management Methods, **Harry House, USGS Middleton, Wisconsin** Data Integration and Delivery through a Web-Enabled Environmental Data Warehouse, **Steve Kloiber, Metropolitan Council St. Paul, Minnesota** Using Modernized STORET to Create a State-wide Data Clearinghouse in Iowa, **Mary Skopec, Iowa Department of Natural Resources** STORET - Supporting the Business of Environmental Monitoring, **Cary Mcelhinney, U.S. EPA, Washington, D.C.**
9:30 – 10:00 AM	Break, posters highlighted				

10:00 – 11:30 AM **Track 5: Making Sense of the Data** **Concurrent Presentations and Discussions**	**Considerations for Interpreting Data** The Dynamic Nature of Sediment and Organic Constituents in TSS, **Mark Riedel, Coweeta Hydrolic Lab -USDA Forest Service** Assessing the Sensitivity of Endangered and Threatened Fish Species Using WET, **Jim Dwyer, U.S. Fish and Wildlife Service** Ecological Description of Fish Assemblages in the Coast Range Ecoregion of Washington and Oregon, **Lillian Herger, USEPA, Region 10** Utilization of Thermal Refugia by Salmonids in a Stressed River System: Implications for the Design of Water Quality and Biological Monitoring Programs, **George Guillen, U.S. Fish and Wildlife Service, Arcata, CA**	**Considerations for Developing Nutrient Criteria** Evaluating the Link Between Nutrient Concentrations, Periphyton-Growth Rates, and Biological Indicators of Ecosystem Health in Five Streams in Tennessee and Alabama, **Anne Hoos, U.S. Geological Survey** Establishing Nutrient Criteria for Alabama Reservoirs, **Chris Johnson, Alabama Department of Environmental Management** Nutrient and Algal Dynamics in the Quinebaug River Basin, in Connecticut, **Mike Colombo, U.S. Geological Survey** Environmental Water-Quality Zones for Streams: A New Regionalization Scheme, **Dale Robertson, U.S. Geological Survey**	**Selecting Indicators and Categorizing Results in Environmental Evaluations** Evaluation of Monitoring Data from Three Major Rivers in India : Examination of Present Policies and Exploring the Ways to Maximize the Efficiency of Existing Data, **Lenin Kamepalli, Dept of Environmental Sciences, J.B. Campus, Bangalore University** Oklahoma 's Use Support Assessment Protocols (USAP): An Historical Overview and Their Practical Application, **Bill Cauthron, Oklahoma Water Resources Board/WQ Programs Division** Development and Application of Indicators for Monitoring Coastal Response to Effluent Diversion in Massachusetts Bay, **Carlton Hunt, Battelle** Finding the Gaps: An Assessment of Aquatic Biodiversity for the Great Lakes Region, **Jana Stewart, U.S. Geological Survey**	**Data Evaluation Tools – Statistics, GIS, and Models** Analyzing Archived Water Monitoring Data For Temporal Patterns, **Carl Zipper, Virginia Tech** Estimation of Nutrient Loads Using Continuous Water-Quality Monitoring and Regression Analysis Compared to Other Load-Estimation Methods, **Victoria Christensen, U.S. Geological Survey** A WEB-based GIS Application with a Focus on Source Water Protection Goals of the Safe Drinking Water Act, **William Cooter, RTI** The Dane County , Wisconsin Groundwater Flow Model - An Important Tool for Water Resource Management, **Kenneth Bradbury, Wisconsin Geological and Natural History Survey**	**Examples and Experiences with Multimetric Indices** Vegetation Index of Biotic Integrity (VIBI) for Wetlands: Ecoregional, Hydrogeomorphic and Plant Community Comparisons with Preliminary Wetland Aquatic Life Use Designations, **John Mack, Ohio Environmental Protection Agency** Development and Testing of a Stream Site Classification for Mississippi, **David Bressler, Tetra Tech, Inc.** Invertebrate Index of Biological Integrity for Wetlands Assessment, **Judy Helgen, Minnesota Pollution Control Agency** Use of Indices in Evaluating Florida's Ground Water Quality, **Rick Copeland, Fl Dept. of Environmental Quality**
11:30 – 1:30 PM	Speaker Luncheon, Conference Dedication and Award Presentation (Lunch Provided)				

1:30 – 3:00 PM **Track 6: Data to Information to Action** **Concurrent Presentations and Discussions**	**Communicating Results that People Can Understand** "Developing communication strategies involves setting goals and figuring out how to reach them. This interactive session will examine a series of steps we can use to craft effective communication strategies to get us where we want to go: objective, audience, message, format, distribution, and evaluation. Facilitators: **Abby Markowitz** and **Kristen Pavlik, Tetra Tech**"	**Volunteer Monitoring Programs Bridge the Communication Gap** Monitoring for Action, **Elizabeth Herron, URI Cooperative Extension** FM River Project, **Thomas Moe, Energy & Environmental Research Center** Adopt-A-Lake: Initiating Citizens to Action!, **Laura Vega, University of WI, Stevens Point** Volunteer Environmental Monitoring and NPS Pollution Prevention in Texas, **Jason Pinchback, Texas Watch**	**Initiating Action at the Local Level** Amish Water Quality Education, **James Hoorman, Ohio State University Extension** Design of Water Quality Information Systems within the Framework of Collaborative Watershed Organizations, Case Study: Big Thompson Watershed Forum, **Julianne Brown, Colorado State University** Communicating Water Quality/Quantity Data to a Small Wisconsin Village Board in time for Informed Decisions, **Wes Halverson, University of Wisconsin-Stevens Point** Coupling Hands-On Geoscience Education with Riparian Restoration in the Red River Basin, North Dakota, **Charlene Crocker, Energy & Environment Research Center**	**Computerizing the Environmental Movement** Using Internet Information to Protect Water Quality in Missouri, **Tabitha Madzura, UOE/Mo Win** Dissemination of Beach Water Quality and Notification Nationwide, **Tim Gormley, Earth 911** Online with IOWATER Monitors, **Lynette Seigley, Iowa Department of Natural Resources - Geological Survey Bureau** GIS Outreach and Training Approaches for Decision-Makers and Educators to Ensure Data to Action in Local Watersheds, **Jeffrey Schloss, University of New Hampshire**	**Communicating the Big Picture** Water in the Dutch National Accounts, **Rurd Maasdam, Institute for Inland Water Management and Waste Water Treatment RIZA** Key Strategies Toward Solving The Water Monitoring Problem in EPA Region 7: A Strategic Plan for Improving our Inability to Monitor and Characterize All Waters, **Lyle Cowles, USEPA** Communicating U.S. Geological Survey Water-Quality Data Using Health-Based Screening Levels, **Patty Toccalino, Oregon Health and Science University** Navigating the Path from Data to Information with a PR Pro as a Guide, **Edward Konsevick, New Jersey Meadowlands Commission**
3:00 – 3:30 PM	Break, posters highlighted				
3:30 – 5:30 PM **Building on the track presentations and discussions, we will use these working sessions to explore the relationship between the monitoring framework and the goals of the Council's four workgroups.**	**Water Information Strategies** The goal of this Council workgroup is to create and communicate goal-oriented monitoring design guidance that results in comparable information, over time and space, being produced in support of management decision making.	**Methods and Data Comparability** The goal of this Council workgroup is to explore, evaluate, and develop methods and approaches to measurement that facilitate collaboration and promote comparability between water quality monitoring programs.	**Collaboration and Outreach** The goal of this Council workgroup is to build and support creative partnerships among the many elements of the monitoring community, particularly by supporting the development of state and regional monitoring councils.	**Watershed Components Interactions** The goal of this Council workgroup is to provide a national forum to demonstrate how the interactions of the ground water resource with other components of the watershed can impact the ecological integrity of the entire system.	

THURSDAY, MAY 23, 2002

8:30 – 11:30 AM	Concluding General Session: Summary reports from Wednesday's four Council workgroup discussion sessions, followed by an open-microphone period.	
11:30 – 1:00 PM	Lunch (On your own)	
1:00 – 5:00 PM	**Adding Structure to the Monitoring Framework** This interactive session will give participants the opportunity to look at a large visual representation of the "monitoring framework" and to brainstorm the missing pieces. This session will help guide the NWQM Council's current and future efforts to promote and sustain the monitoring framework.	**FIELD TRIP** Join us for an afternoon field trip to three locations in the greater Madison area: La Fontaine Springs, Lake Mendota , and Black Earth Creek. We will explore: • effects of urbanization on the surface and ground water resource • approaches to monitoring and reporting beach contamination • impacts of urban and agricultural land uses on a world class trout stream • various biological and water quality sampling methods • new and unique in-situ instruments